Weston Price and The Search for Health

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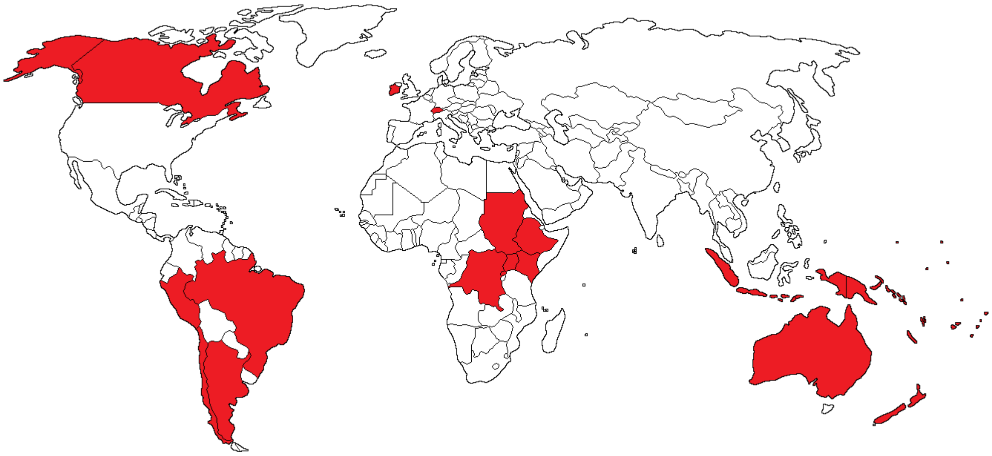
Dr. Weston A. Price was a dentist who lived from 1870 to 1948. He also founded the research section of the American Dental Association, and in 1939 he published a book called *Nutrition and Physical Degeneration*, which explored the question all dentists wanted to know the answer to.

“What causes dental cavities?” Cavities are also known as caries. Dr. Price noticed a significant decline in the physical and mental health of Americans. He had a hunch, long before his work was published, that nutrition lay at the heart of it. So he set about to find the answer, but he did it differently than those who had gone before him. He didn’t analyze symptoms of degeneration. Instead he searched for groups to be used as controls who were largely free from these diseases. He studied primitive racial stocks, including both isolated and modernized groups, and where possible, he studied modernized whites in those communities.

Dr. and Mrs. Price spent a few years traveling around the globe researching different groups of people. They studied Americans and American Indians, and they also visited isolated and modern groups of people in each of the countries marked in red on this map. Travel in the 1930’s was quite arduous, so this is quite a feat. In the map to the right, the red areas are those they visited for their research.



The cause of dental caries was quickly proved to be caused by nutritional deficiencies. But also, “it rapidly became apparent that a chain of disturbances developed in these various primitive racial stocks starting even in the first generation after the adoption of the modernized diet and rapidly increased in severity with expressions quite constantly like the characteristic degenerative processes of our modern civilization of America and Europe.” And further, this is the same kind of degeneration in young Americans of his time.

Moreover, those with these physical deformities showed MENTAL deformities as well. He noticed: personality disturbances, unsocial traits, aggressive behavior, apathy, increased delinquency, etc. Disturbances in the development of the bones of the head are associated with disturbances in the development of the brain. Dr. Price found that physical degeneration results in mental degeneration, which results in ethical or moral degeneration.

He wrote, “The writer is fully aware that his message is not orthodox; but since our orthodox theories have not saved us we may have to readjust them to bring them into harmony with Nature’s laws. Nature must be obeyed, not orthodoxy.”

And “Let us go to the ignorant savage, consider his way of eating, and be wise. Let us cease pretending that tooth-brushes and tooth-paste are any more important than shoe-brushes and shoe-polish. It is store food which has given us store teeth.” Here is a man who trusts the laws of nature and believes that when they are obeyed, the result will be good health. So let’s see what he has to say.

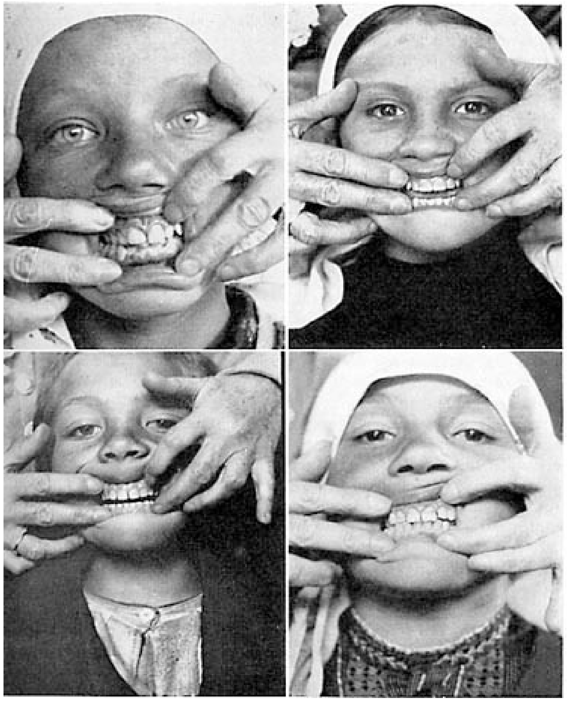
His first stop was to Switzerland in 1931 and 1932. He wanted “to study the possibility of greater nutritive value in foods produced at a high elevation, as indicated by a lowered incidence of morbidity, including tooth decay”. So he studied people living in 4 villages in the Loetschental Valley in the Alps. These villages were not accessible by vehicle, only by footpaths.

Here is a modern color picture of the valley.

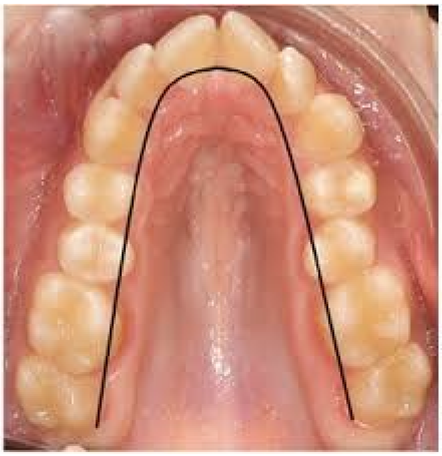
Practically all the human requirements of the people in that valley, except a few items like sea salt, have been produced in the valley for centuries. All their clothing and housing materials were produced in the valley. They had no doctor, no dentist, no policeman, no jail. Because they didn’t need them. They had the “Finest physiques in all Europe”. Many of the famous Swiss guards of the Vatican at Rome have been selected from this and other Alpine valleys. At the time, Tuberculosis was the most serious disease of Switzerland, but a report of inspection of this valley in 1931 did not reveal a single case.

Dr. Price wanted to study these people more, so he arranged to have samples of food, particularly dairy products, sent to him about twice a month, summer and winter. The samples underwent chemical analysis and were found to be high in vitamins and much higher than the average samples of commercial dairy products in America and Europe. The people of the valley knew that the richest milk was produced when the cattle grazed near the snow line of the receding glaciers. June was the time they had the best milk, and they built shrines and kept celebrations for this wonderful, life-giving food. Growing boys and girls normally ate a slice of whole rye bread and a piece of the summer-made cheese (about as large as the slice of bread), with fresh milk of goats or cows. Meat was eaten about once a week.

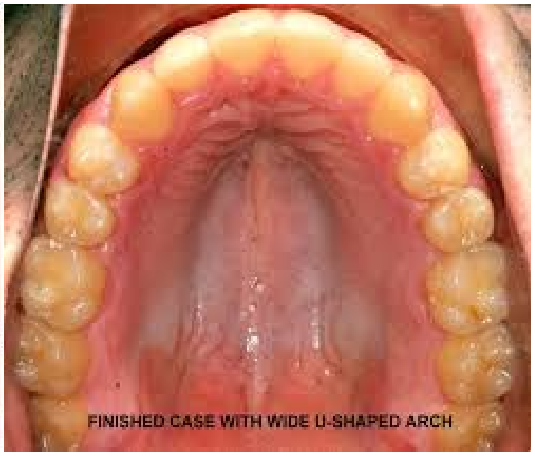
“The average total fat-soluble activator and mineral intake of calcium and phosphorus of these children would far exceed that of the daily intake of the average American child. The sturdiness of the child life permits children to play and frolic bareheaded and barefooted even in water running down from the glacier in the late evening’s chilly breezes, in weather that made us wear our overcoats and gloves and button our collars. Of all the children in the valley still using the primitive diet of whole rye bread and dairy products the average number of cavities per person was 0.3. On an average it was necessary to examine 3 persons to find one defective deciduous or permanent tooth. The children examined were between 7 and 16 years of age.” Here is a picture of typical children from this valley.



Notice they had wide faces, well-formed dental arches, and well-developed nostrils. The dental arch is the U-shaped form of the teeth. When it is narrow, the wisdom teeth must be extracted. When it is wide, there is room for all of the teeth.

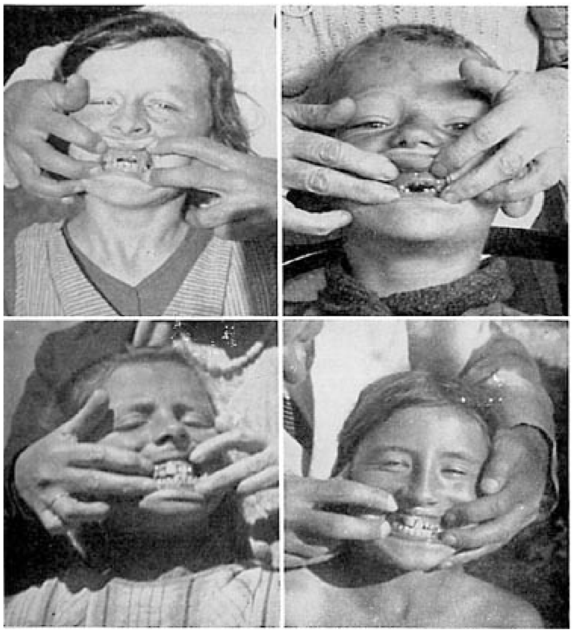


Narrow dental arch



Wide dental arch

Overall, Price found about 1% tooth decay in these communities. Afterwards, Dr. Price traveled to some more modern Swiss communities. This is what he found.



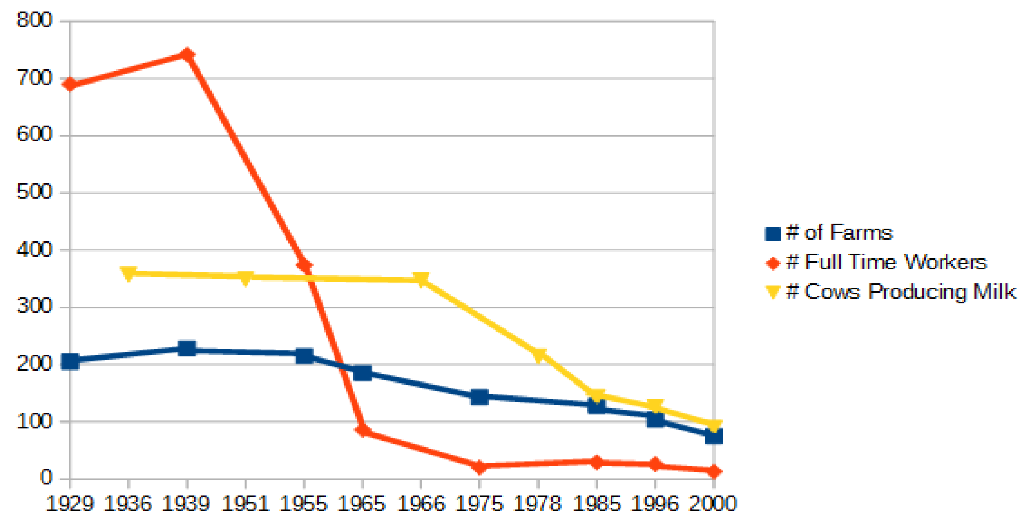
The girl, upper left, is 16 and the one to the right is younger. They use white bread and sweets liberally. The 2 children below have very badly formed dental arches with crowding of the teeth. Overall, Price found about 33% tooth decay in these communities.

Linda Joyce Forristal decided to follow in the footsteps of Dr. Weston Price by visiting the Loetschental Valley in 2003. Here are some things she discovered:

> The tourism authority for the valley always ends their emails with the signature, “Friendly Greeting from the Valley of Valleys.” It is a beautiful valley and one to be proud of for its majestic scenery and beautiful architecture. Above the towns situated on the valley floor, cows graze on the alpine pasture.
>
> However, what I saw in the valley was a culture in danger of losing its agricultural roots. To be blunt, junk foods abounded. While our half-board arrangement at the hotel gave us a good breakfast with cheese and bread in the morning and a hot meal for the evening meal, it was hard to find good food in the stores. And we were served pale, commercial butter with each meal instead of golden alpine butter, rich in nutrients. Some restaurants still serve rye bread and raw milk cheese as an entrée or appetizer, but most of the small stores in the valley are filled with processed foods like chips, candy and soft drinks. Oftentimes, alpine butter sat next to ultra-high temperature pasteurized (UHT) milk on the grocery shelf. Switzerland is, after all, headquarters to Nestlé.
>
> During our stay in the valley, we learned that the inhabitants are slowly abandoning farming due to the fact that they cannot make a living wage. Over the past few decades a large exodus from the valley to look for work has left the older inhabitants to take care of the dwindling dairies. Most of these workers are women. When I finally sufficiently explained my desire to the valley tourism officials to see “cows and milk,” I was taken to a spot off the main valley road called “cow path.”

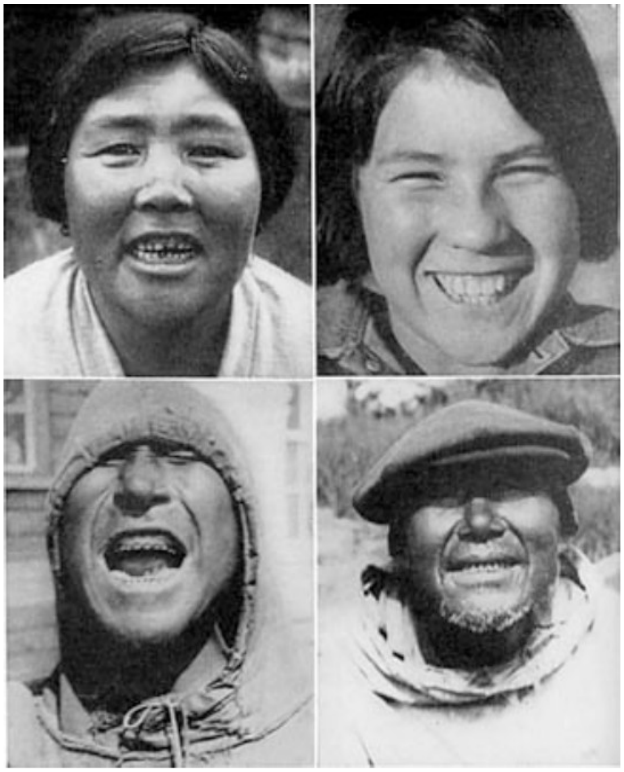
> With our guide in lead, we walked up a very long steep hill through a pasture towards a lean-to in the far distance. I was told this is where we would find some cows and hopefully some signs of activity and someone to interview. My son and I were rapidly loosing steam and were out of breath, when we saw a dairywoman approaching at fast pace down the path we were struggling so hard to ascend. I asked the tourism official to ask her to stop so I could take a picture, but he would not. So, I tried to get her attention, but she just kept moving – either ashamed or shy of getting her picture taken. Hence, I got pictures of her coming and going, with a 50-pound container of milk strapped to her back. As she continued to descend, he kept going up the pasture towards the aforementioned lean-tos. When we arrived, we found a couple of cows in the shack resting after having been milked. I was told they would probably stay there the night and be let out the morning to forage on the alpine grass and flowers again. By the time we were finished looking around, the woman had disappeared.
>
> The morning of my departure, I was determined to make a deeper connection to what appeared to be the vanishing dairy culture of the valley. Unable to persuade the tourism officials to take me to a high-alpine dairy above 3,000 meters, I decided to camp out at the valley's main cheese factory to see who came to deposit their morning milk. First, a local milk lady arrived with milk cans on a humble pull cart. After about a half hour, a muscular and tanned woman arrived with several milk cans piled in the back of her SUV. She had just milked her cows on the high-alpine pasture and had driven the milk down to the dairy. She only spoke German, so I interviewed her with my intermediate German skills. I found out that she only had 6 cows and spent the summer living with them at high altitude. I so wished I had been introduced to her on the day of my arrival.

When she got home, she contacted the Swiss government to get agriculture data about the valley. Here is a chart with the data she obtained. You see a general trend downward in number of farms, number of full-time workers, and number of cows producing milk. In the mid-to-late 1930's there were 228 farms, 742 full-time workers aged 15 or older, and about 350 cows producing milk. By the year 2000, there were only 75 farms, 13 full-time workers, and 89 cows producing milk.



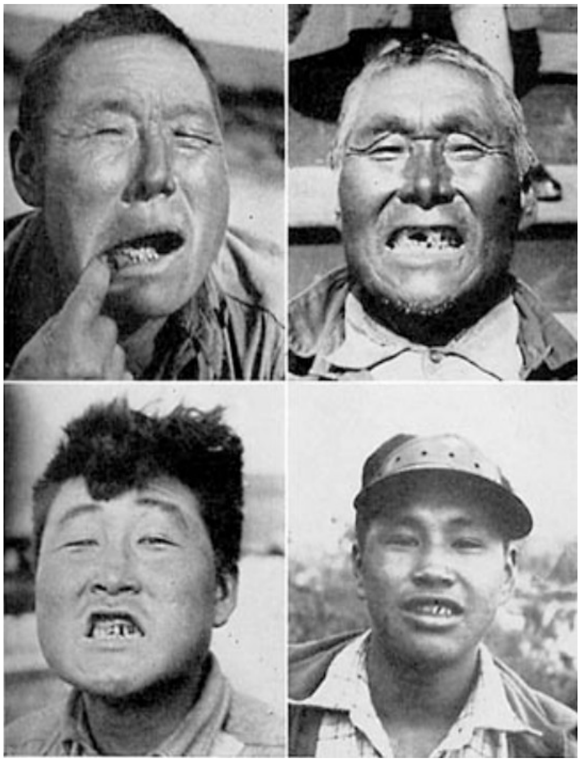
In 1933 Dr. and Mrs. Price went to visit Eskimos in Alaska. A government station had been established on the Kuskokwim River to deliver supplies. "This contact with civilization has made available modern foods for a limited district, chiefly at the point at which the boat lands, namely, Bethel." A portion of these supplies was transported by river boat to settlements farther up the river. However, a great number of Eskimos live a distance of several hundred miles from Bethel, and have little or no contact with this food. Dr. Price’s field studies “required transportation over long distances and into districts where travelling facilities were practically non-existent by other means than by modern aeroplane.”

First they found a band of Indians at Stony River. “They had been described as being very primitive. All the people were busy catching and storing the running salmon. After drying the fish they are smoked for a few hours and then stored for winter use. These thrifty people have physical features quite unlike the Indians of central, southern and eastern Alaska. Of the 12 individuals studied here, 10 had lived entirely on the native foods or practically so. In their 288 teeth only 1 tooth was found that had ever been attacked by tooth decay, or 0.3%. Two had come up from the Kuskokwim River, of which the Stony River is a branch. There, they had received a considerable quantity of the “store grub” that had been shipped up the Kuskokwim from Bethel. 27% of the teeth of these 2 had been attacked by dental caries.”

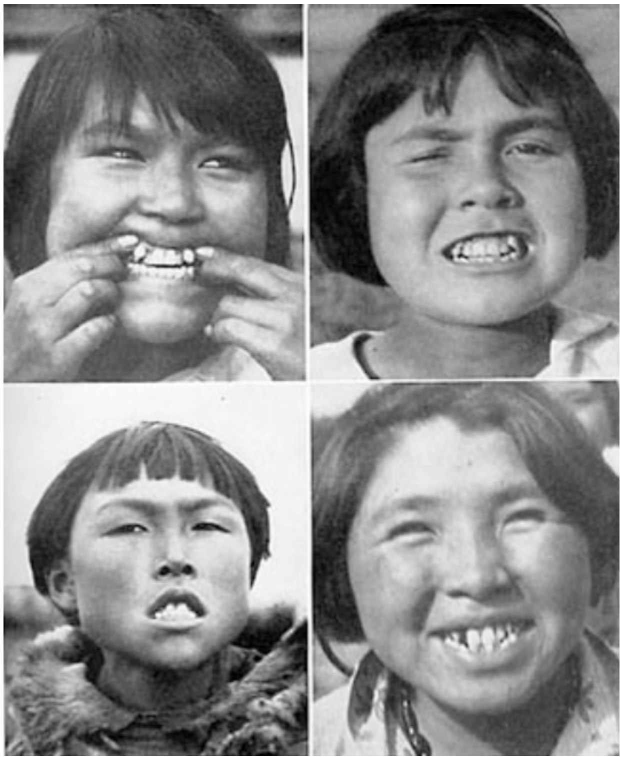


In this picture you see the typical features of Eskimos and Indians eating their native foods. The woman in the top left portrait is a mother of 26 children. Not a single tooth has suffered from tooth decay. Her husband was an American who ate some refined foods, and so he and some of their children suffered from dental caries. As a side note, the mother reported remarkably easy childbirth, saying that several of them had been born during the night and that she had not bothered to wake her husband, but had introduced him to the new baby in the morning. Dr. Price was told that an average adult Eskimo man can carry one hundred pounds in each hand and one hundred pounds in his teeth with ease for a considerable distance.

But when modern foods are eaten, tooth problems begin to develop, the gums start to bleed, and the general health of the individual suffers.



“It is a matter of great significance that the Eskimos who are living in isolated districts and on native foods have produced uniformly broad dental arches and typical Eskimo facial patterns. Even the first generation forsaking that diet and using the modern diet, presents large numbers of individuals with marked changes in facial and dental arch form.” These children are of the first generation following the adoption of modern foods by their parents. “While dental arch deformities or crowded teeth are practically unknown among many of the primitive groups of Eskimos, they occur frequently in the first generation of children born after the parents have adopted the white man’s foods. Note the narrow nostrils and changed facial form of these children.”

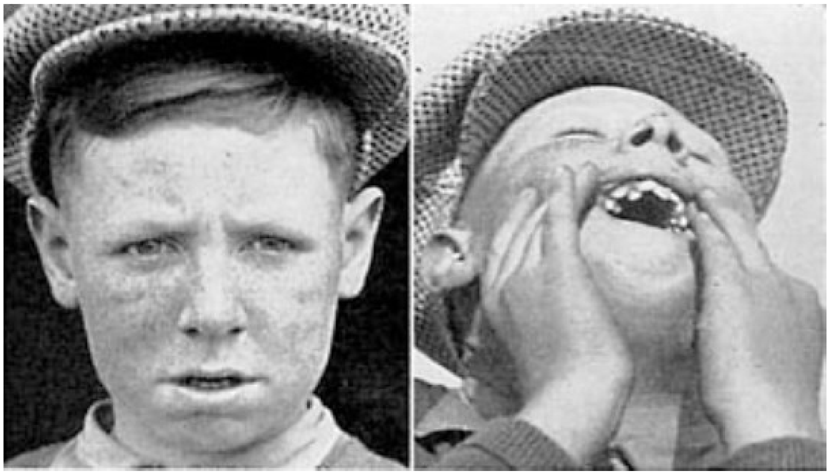


So what is the natural diet of the Eskimos and Indians? Fresh and dried salmon; seals, especially seal oil, one of the richest sources of vitamin A that Dr. Price found; fresh and dried fish and fish eggs (caviar). Dr. Price writes, “From a chemical standpoint they are one of the most nutritious foods I have found anywhere.”; caribou; nuts; berries; kelp; blossoms of flowers preserved in seal oil; sorrel grass preserved in seal oil. No grains, no milk, not much fruit or vegetables. But they ate the organs of the animals they killed, and they used the bones to make broths.

Dr. Price noted that the Eskimos’ teeth manage to survive and be healthy in the face of great adversity. In the process of tanning, the leather is chewed, which results in excessive wear to the crown of the teeth. Also the fish and fish eggs the Eskimos ate would be hung to dry, and the drifting sand would cling to their moist surfaces. Thus, they would eat not only the dried fish or eggs, but also the sand which was stuck to it, resulting in a sand-paper-like texture of the food, which also wore down the teeth.

“...Even though the teeth were worn down to the gum line and into what was formerly the pulp chamber, the pulp was not exposed. Nature had built a protecting zone, not in the cavity of the tooth in this case, but within the pulp chamber. This entirely blocked off a threatened exposure and kept the walls of the fort sealed against bacteria. This process does not occur in many instances in people of our modern civilization. Pulp chambers that are opened by wear provide exposed pulp which becomes infected with subsequent abscess formation.”

The fact that the pulp chamber was filled with secondary dentin instead of remaining exposed shows that the diet of the native peoples provided sufficient nutrients to continue to protect the teeth from the harsh abuse they received.



This white boy was born and raised in Alaska on imported foods. Dr. Price traveled with the mother who was bringing him to the US for an operation on his nose, because he was a mouth-breather. His facial deformity includes a lack of development of the air passages, so that he breathes through his mouth. Lack of bone development creates the crowded condition of the teeth. Note his narrow nostrils and markedly under-developed middle and lower thirds of the face. Their disfiguration is typical of that of large numbers that are developing in our highly modernized communities, and is similar, in general, to the deformities which develop in the primitive races after they adopt the modernized nutrition.

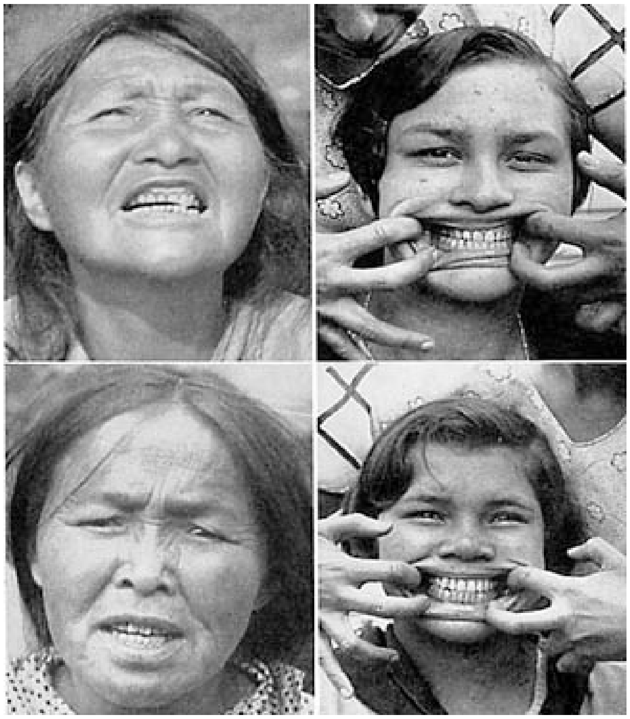
Dr. Price writes, “Notwithstanding the very inhospitable part of the world in which they reside, with 9 or 10 months of winter and only 2 or 3 of summer, and in spite of the absence for long periods of plant foods and dairy products and eggs, the Eskimos were able to provide their bodies with all the mineral and vitamin requirements from sea foods, stored greens and berries and plants from the sea.”

Next, in order to find Indians as little changed as possible by contact with the white man, particularly with his foods, Dr. Price went to northern Canada to the region inside the Rocky Mountain range to study the Indians of Northern British Columbia and the Yukon territory. To him it was particularly desirable to reach a group of Indians who could not obtain the animal life of the sea, not even the running salmon. The winters reached temperatures of 70 below zero, so there was no way to maintain dairy cows or grow vegetables and grains. Their diet consisted almost exclusively of the animals they could hunt.

Dr. Price writes, “When I asked an old Indian, through an interpreter, why the Indians did not get scurvy he replied promptly that that was a white man’s disease. I asked whether it was possible for the Indians to get scurvy. He replied that it was, but said that the Indians know how to prevent it and the white man does not. When asked why he did not tell the white man how, his reply was that the white man knew too much to ask the Indian anything. I then asked him if he would tell me.... He then described how when the Indian kills a moose he opens it up and at the back of the moose just above the kidney there are what he described as two small balls in the fat. These he said the Indian would take and cut up into as many pieces as there were little and big Indians in the family and each one would eat his piece. They would eat also the walls of the second stomach. By eating these parts of the animal the Indians would keep free from scurvy, which is due to the lack of vitamin C. The Indians were getting vitamin C from the adrenal glands and organs. Modern science has very recently discovered that the adrenal glands are the richest sources of vitamin C in all animal or plant tissues.”

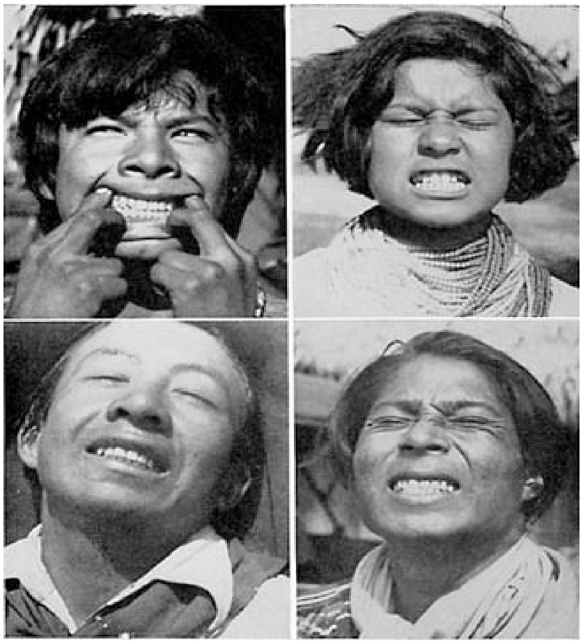
This typical family of forest Indians of Northern Canada presents a picture of superb health. They live amidst an abundance of food in the form of wild animal life in the shelter of the big timber.

Wherever the Indians were living on their native foods, chiefly moose and caribou meat, their physical development including facial and dental arch form was superb with nearly complete immunity to dental caries. These 2 women and 2 girls are typical. In an examination of 87 individuals having 2,464 teeth only 4 teeth were found that had ever been attacked by dental caries. This is equivalent to 0.16%.

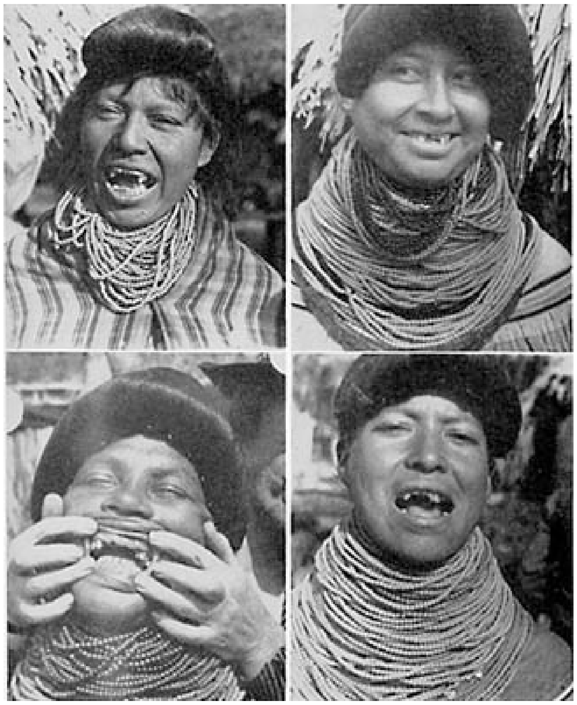


For comparison, Dr. Price visited “the largest single Indian Reservation in Canada, which is located at Brantford, Ontario. In this group there are about 4,700 Indians living under highly modernized conditions provided by the Canadian Government. They live on very fertile land and in close proximity to a modern Canadian city. Each head of a family is provided with a tract of land from which he usually has an income sufficient to permit him to have an automobile. They were able to buy not only necessities and comforts according to the modern standards of the white man, but many of the luxuries as well. The government provides a well administered hospital and staff. When I asked the Director of this hospital, Dr. Davis, what the principal use of the hospital was at that time (1933), he said that the demand for beds had completely changed in the 28 years he had been there. The principal services requested at the hospital in 1933 related to the problems of maternity. He stated that in his period of contact he had seen 3 generations of mothers. The grandmothers of the present generation would take a shawl and either alone or accompanied by one member of their family retire to the bush and give birth to the baby and return with it to the cabin. A problem of little difficulty or concern, it seemed. He stated that today the young mothers of this last generation are brought to his hospital sometimes after they have been in labor for days. They are entirely different from their grandmothers or even mothers in their capacity and efficiency in the matter of reproduction. He stated that that morning he had had 2 cases in which surgical interference was necessary in order to make birth possible.”

The Seminole Indians living today in southern Florida largely beyond contact with the white civilization still produce magnificent teeth and dental arches of which these are typical. They live in the Everglade forest and still obtain the native foods. The rate of dental caries here was about 4%.

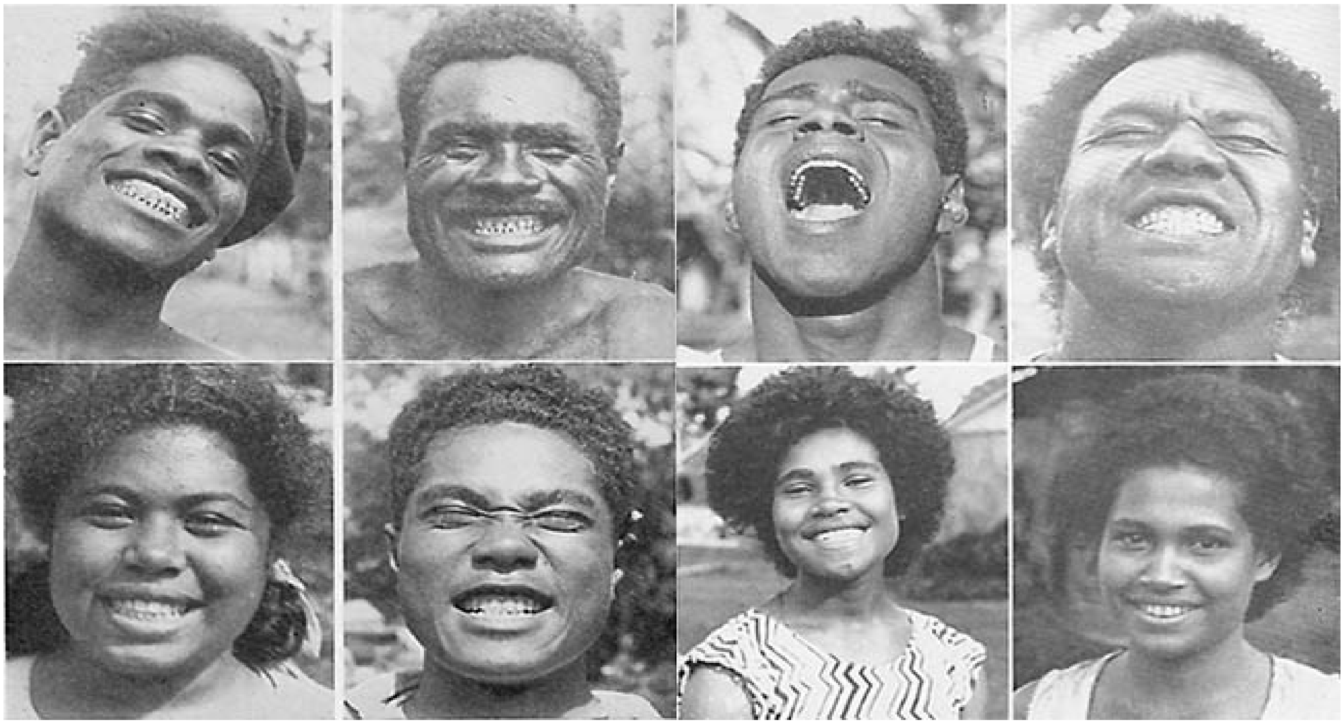


Contrasted with...

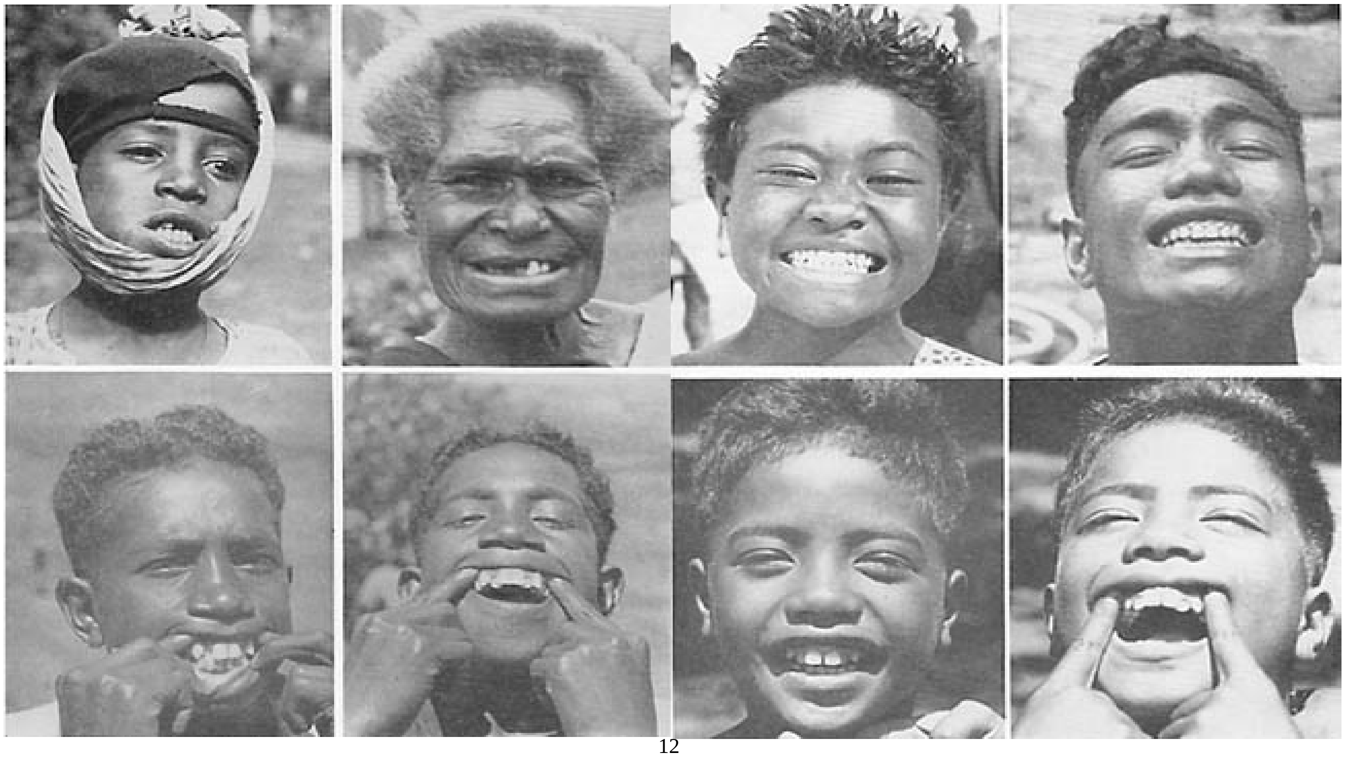


A 40% rate of caries by those Indians who were living in contact with modern civilization and eating nutrient-deficient foods. Many dental arches showed a typical deformation with crowding of the teeth and narrowing of the face, conditions that have been found in all human stocks when on an inadequate nutrition during the formative and early growth period.

In 1934, and again in 1936, Dr. Price went to Polynesia and the Fiji Islands.



No dentists or physicians were available on most of these islands. Toothache was the only cause of suicide. The new generation born after the parents adopted the imported modern foods often had a change in the shape of the face and dental arches. Dr. Price noticed a lengthening and narrowing of the face with crowding of the teeth in the arch. The native foods of the Islanders consisted of animal life from the sea eaten with plants and fruits from the land. In their primitive state only 0.42% of their teeth were attacked by tooth decay. In the modernized groups this incidence increased to 30.1%. The change in the nutrition included a marked reduction in the native foods and their displacement with white-flour products, sugar and sweetened goods, canned foods, and polished rice.



Dr. Price had a chance to examine the crew of pearling boats on some of these islands. “The pearling boats feed their crew largely on commercial provisions. When the men have been continuously on the boats for 1 or 2 years, or often when they have been at sea using this food for 6 months, they have rampant tooth decay. When the cavities approach or reach the pulp chambers the pain produced in the teeth by the high pressure in deep water produces such agony that they often have to give up pearling.”

Dr. Price studied groups on many South East Islands. Those who ate primitive diets had between 3 and 6 teeth per 1000 teeth that were decayed. Those who ate the white man’s food had between 180 and 300 teeth per 1000 teeth that were decayed.

One of the foods of the natives in the South Sea is fermented shark liver oil. They endured considerable danger to procure the sharks even though other, less dangerous-to-catch seafood was plentiful. To prepare the oil, they put the livers inside the leathery stomachs of the shark and hung them in the trees for several months. As it ferments, the oil gradually comes out of the livers and fills the hanging stomachs. The yield is about one liter per shark.

Dr. Price journeyed through eastern and central Africa in 1935. He covered about 6,000 miles, encountered about 30 tribes, and made over 2,500 photos. “In 13 tribes we did not meet a single individual with irregular teeth. Where the members of these same tribes had adopted modern civilization many cases of tooth decay were found. In the next generation following the adoption of the European dietaries dental arch deformities frequently developed.”

One tribe he studied was the Masai. Here is Dr. Price’s guide, who stands 6’ tall, next to a typical Masai man. This tribe migrated from the Nile region southward and is now located in southern Kenya and northern Tanzania. They are very tall and strong.

The Masai are cattle herdsmen, and their main food sources are milk, blood, and meat, reinforced with some fruits and vegetables. They are very skilled in taking care of their cattle. They know how to treat a cow that is having trouble conceiving, and they can perform necessary operations skillfully.

They judge the value of a cow for keeping in their herd by the length of time it takes her calf to stand on its feet and run after it is born, which is only a very few minutes. Many of the calves of the modern high-production cows of civilized countries are not able to stand for many hours after birth, frequently 24. This ability to stand is very important in a country infested with predatory animals.

They defend their herds with simple spears and have chased lions away to steal their kill. In the time of Dr. Price, the governments were trying to make the Masai into an agricultural people, and still today the governments have instituted programs to encourage the Masai to abandon their traditional semi-nomadic lifestyle, but the people have continued their age-old customs. They are welcoming to visitors who wish to experience their culture, traditions, and lifestyle, and so they have become better known through tourism. With this, however, there is an increase in physical deformities.

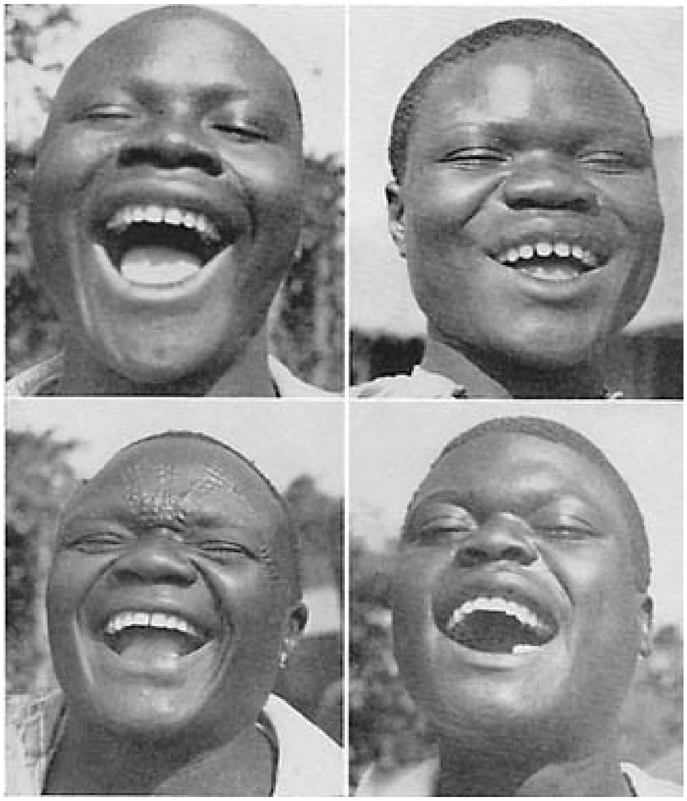
Dr. Price examined 2,516 teeth in 88 individuals distributed through many Masai villages. He found a total of 10 carious teeth, or only 0.4% of the teeth attacked by tooth decay. According to studies by the International Livestock Centre for Africa there has been a very great change in the diet of the Masai towards non-livestock products with maize comprising 12-39% and sugar 8-13%; about one litre of milk is consumed per person daily. Most of the milk is consumed as fermented milk or buttermilk (a by-product of butter making). The inclusion of blood in the traditional diet is waning due to the reduction of livestock numbers. More recently, the Masai have grown dependent on food produced in other areas such as maize meal, rice, potatoes, cabbage, etc. The Masai who live near crop farmers have engaged in cultivation as their primary mode of subsistence.

In contrast with the Masai, the Kikuyu tribe, which inhabits a district to the west and north of the Masai, are characterized by being primarily an agricultural people. Their chief articles of diet are sweet potatoes, corn, beans, and some bananas, millet, and Kafir corn, a variety of Indian millet. They are not as tall as the Masai and physically they are much less rugged.

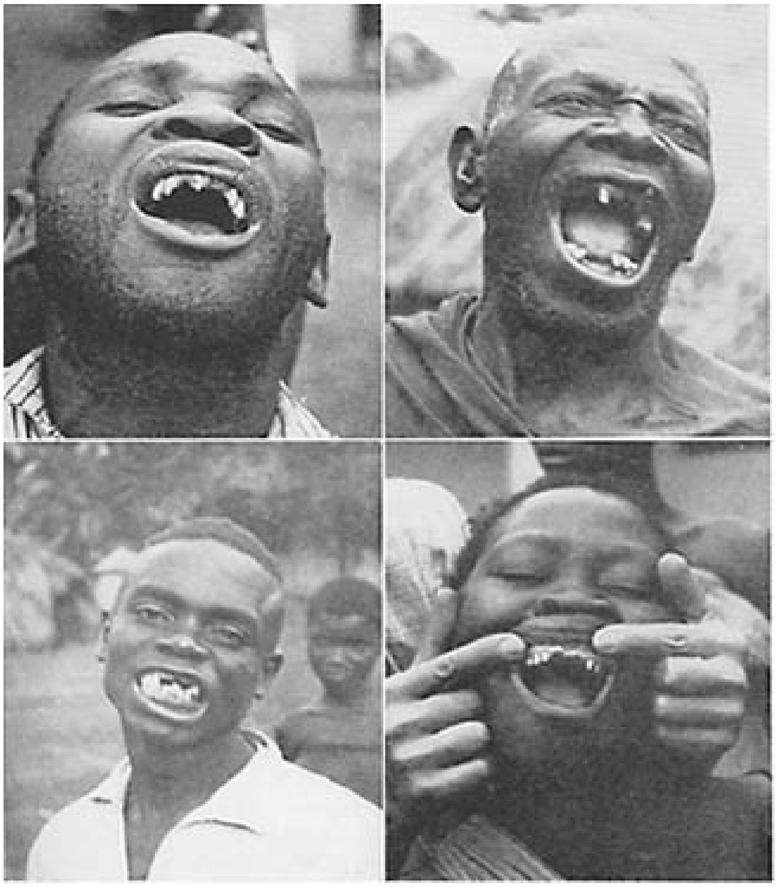
Several of the tribes neighboring Ethiopia are agriculturists and grow corn, beans, millet, sweet potatoes, bananas, Kafir corn, and other grains, as their chief articles of food. Physically they are not as well built as either the tribes using dairy products liberally or those using fish from the fresh water lakes and streams. They have been dominated because they possess less courage and resourcefulness.

While the Bahema tribe originally lived very largely on cattle products, milk, blood and meat, in this district, the herds were small and they were using a considerable quantity of cereals, chiefly corn and beans, some sweet potatoes and bananas. These latter were the chief foods of the other tribes, in addition to goats' milk. An examination of 2,196 teeth of 77 individuals revealed 160 teeth with caries, or 7.2%. 53% of the individuals had caries.

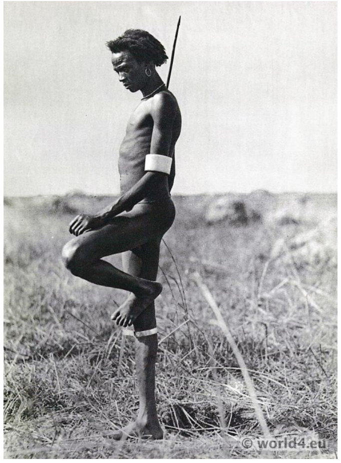
The Wanande Tribe in the Congo eats a diet consisting largely of bananas, sweet potatoes, cereals and goats' milk. In an examination of 368 teeth of 13 individuals, there were 8 teeth with caries, or 2.2%. 15.4% of the individuals were affected.



Where the members of the African tribes had attached themselves to coffee plantations and were provided with the imported foods of white flour, sugar, polished rice and canned goods, tooth decay became rampant.



The Neurs on the Nile River are a unique tribe because of their remarkable stature. Many of the women are 6’ tall and the men range from 6’ to 7.5’ in height. Their food consists very largely of animal life of the Nile, dairy products, milk and blood from the herds. I learned that they have a belief which to them is their religion, namely, that every man and woman has a soul which resides in the liver and that a man’s character and physical growth depend upon how well he feeds that soul by eating the livers of animals. The liver is so sacred that it may not be touched by human hands. It is accordingly always handled with their spear or saber, or with specially prepared forked sticks. It is eaten both raw and cooked. A study of 1,268 teeth of 39 individuals revealed only 6 teeth with dental caries, or 0.5%. Only 3 individuals had caries, or 7.7%.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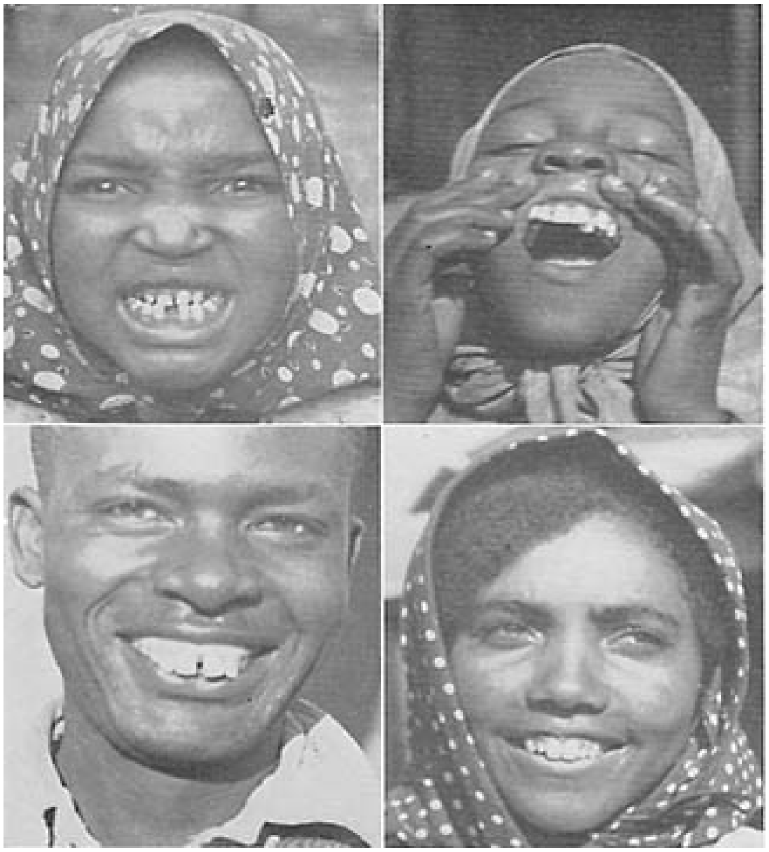
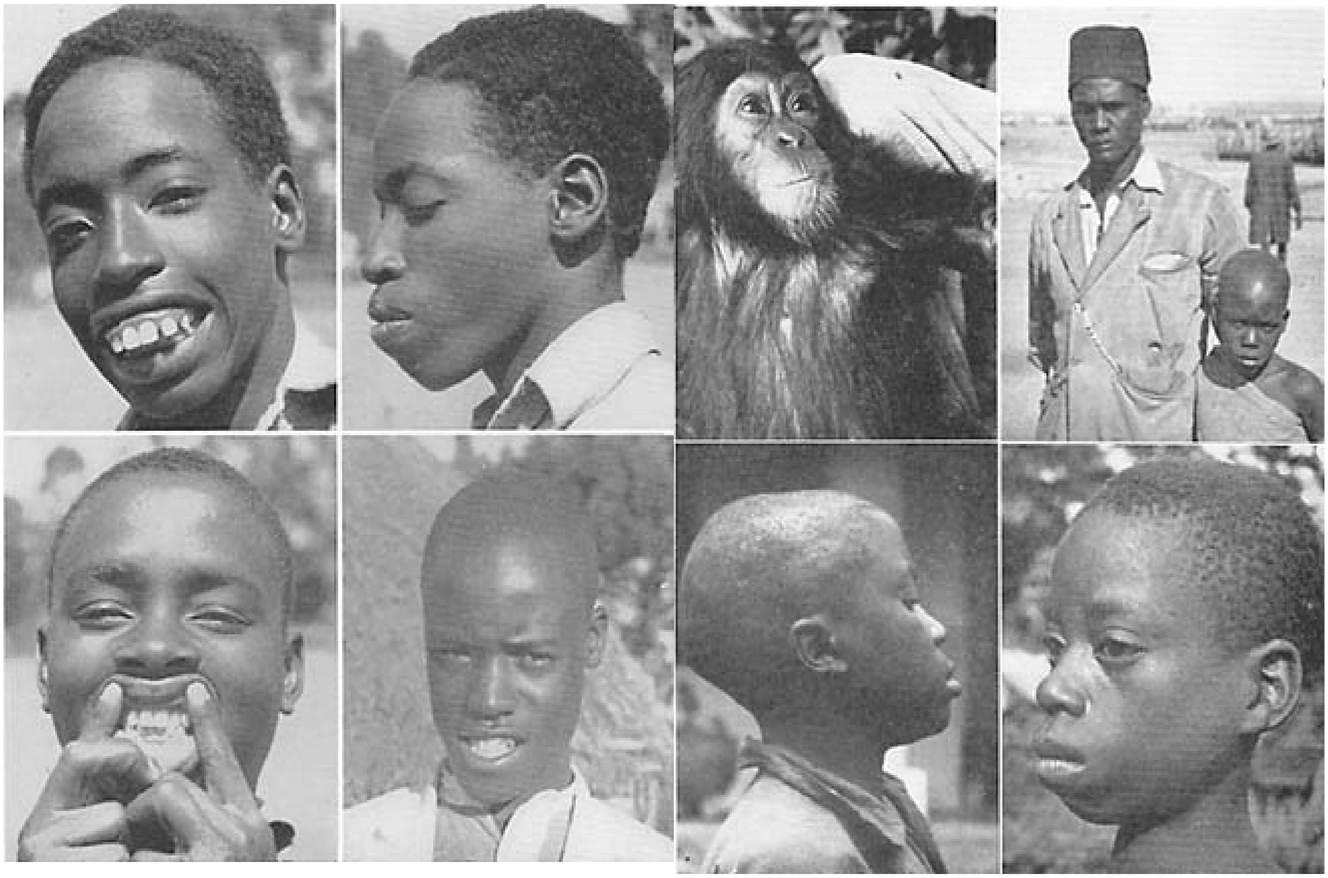
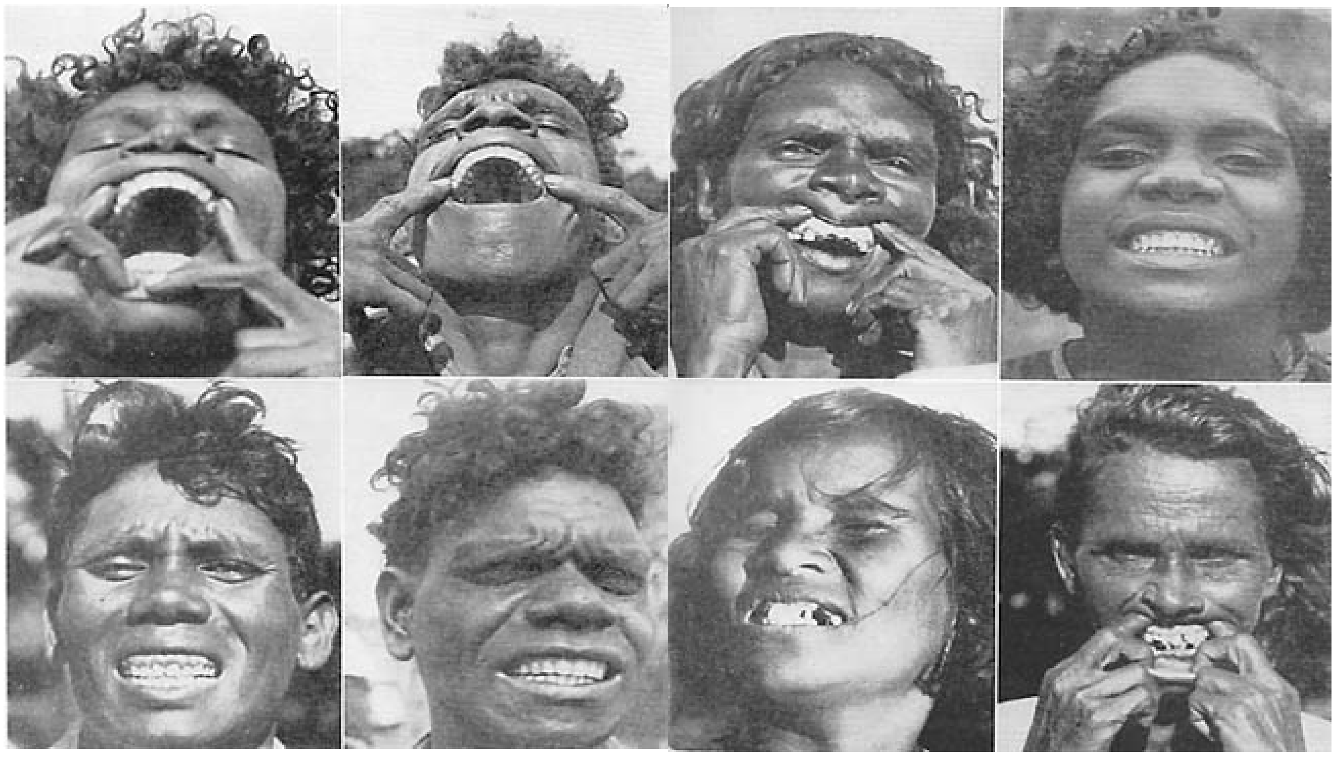
While the primitive racial stocks of Africa developed normal facial and dental arch forms when on their native foods, several characteristic types of deformity frequently developed in the children of the modernized groups. Among the deformity patterns a lack of development forward of the middle third of the face or of the lower third of the face often appeared in the more highly modernized groups. In the upper left the upper arch is much too small for the lower and nearly goes inside it. The upper right is narrowed with crowding of the teeth. Both lower cases demonstrate an underdevelopment of the mandible of the lower jaw.



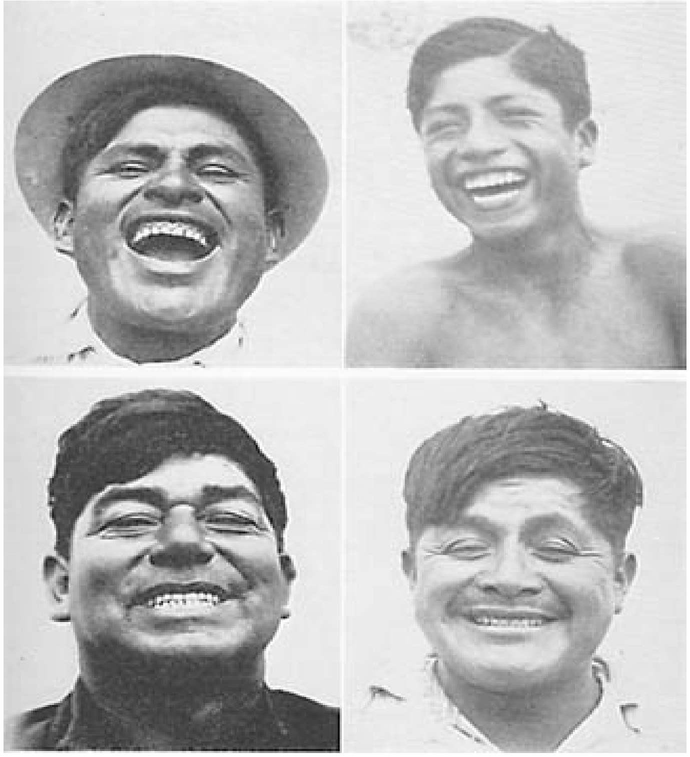
As in our civilization, even the first generation, after the adoption of modernized foods may show severe deformities. Note the extreme protrusion of the upper teeth with shortening of the lower jaw in the upper pictures and the marked narrowing with lengthening of the face in the lower views. These extreme deformities often produce facial expressions that are suggestive of the faces of some of the monkeys, such as the chimpanzee pictured here.



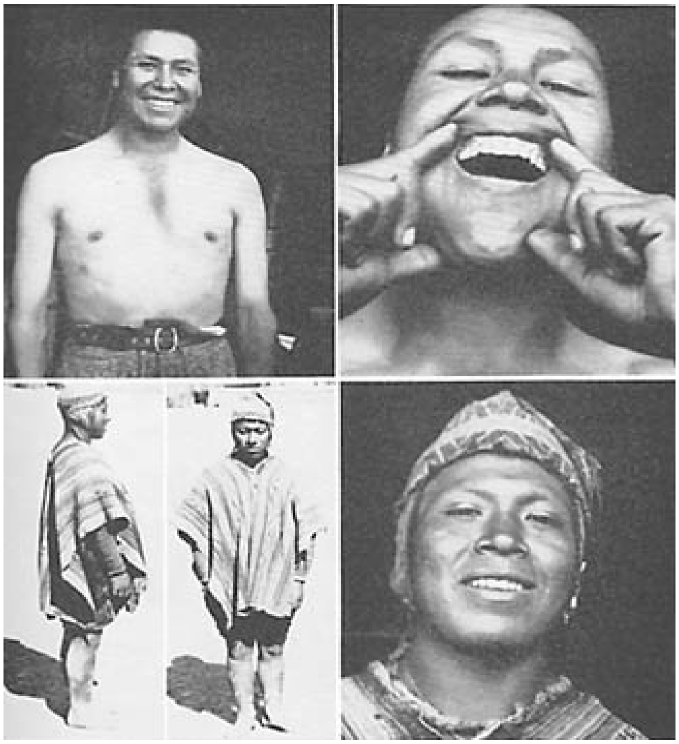
Dr. Price visited the Aborigines of Australia in 1936. They are excellent trackers, can see more stars and planets than the white man with the naked eye, can catch fish without seeing them but by observing the movements of the water and grasses in them, have survived in a harsh climate with less than 10" rainfall per year, and live their lives by the Golden Rule. When they are placed in reservations and eat the white man's food, they develop dental caries and deformities of the face as seen in the photos on the right.



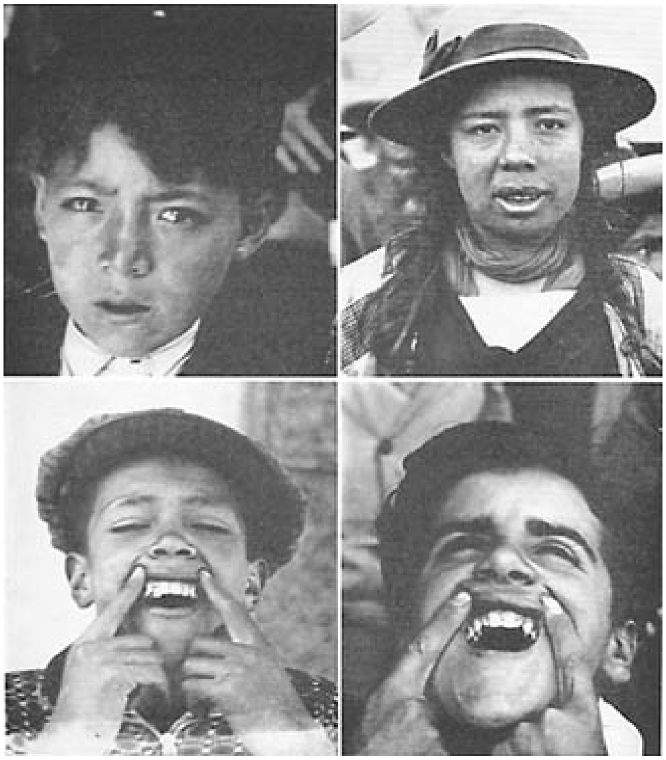
Some descendants of the ancient Chimu culture are still living in a few fishing villages in the north of Peru. They live, as did their ancestors, largely on the sea food. Typical faces of this native stock are shown in this photograph. Note the breadth of the dental arches and full development of the facial bones.



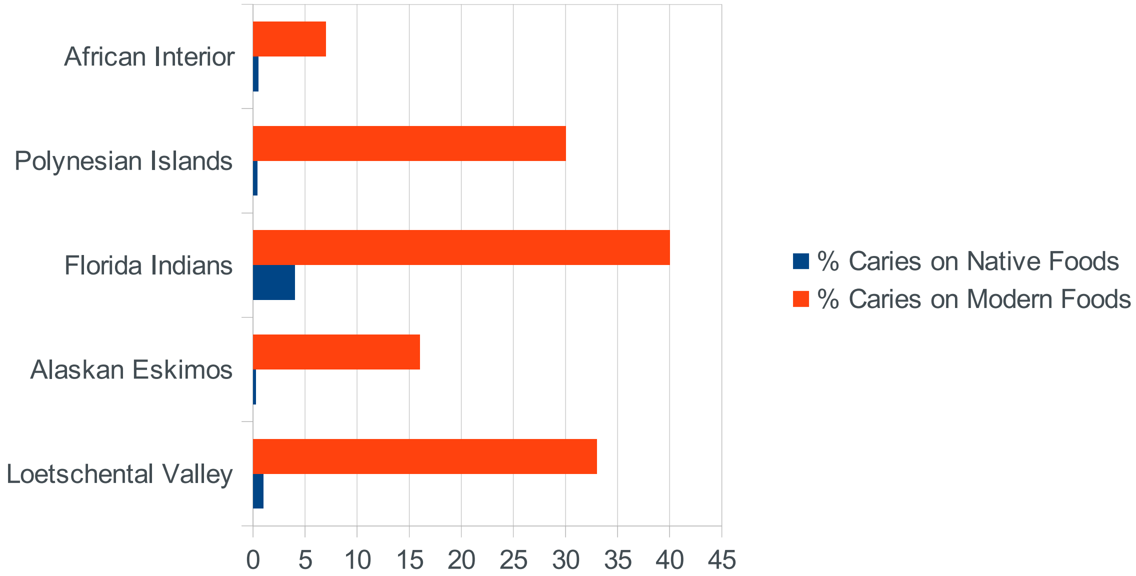
The chest development, of necessity, must have large lung capacity for living in the rare atmosphere of the high Andes. The boy shown above has a magnificent physique, including facial and dental arch development. Below is seen the typical clothing worn up among the snows. Even in frosty weather they are bare below the knees.



The modernization of the Sierra Indians through the introduction of foods of modern commerce has produced a sad wreckage in physique and often character. The boy at the upper left is a mouth breather because his nostrils are too small to carry sufficient air. The girl at the upper right has a badly underdeveloped chin and pinched nostrils. Both boys below have badly narrowed arches with crowding teeth.



Many other groups were studied by Price, but similar results were found with them as with the ones I’ve summarized for you.

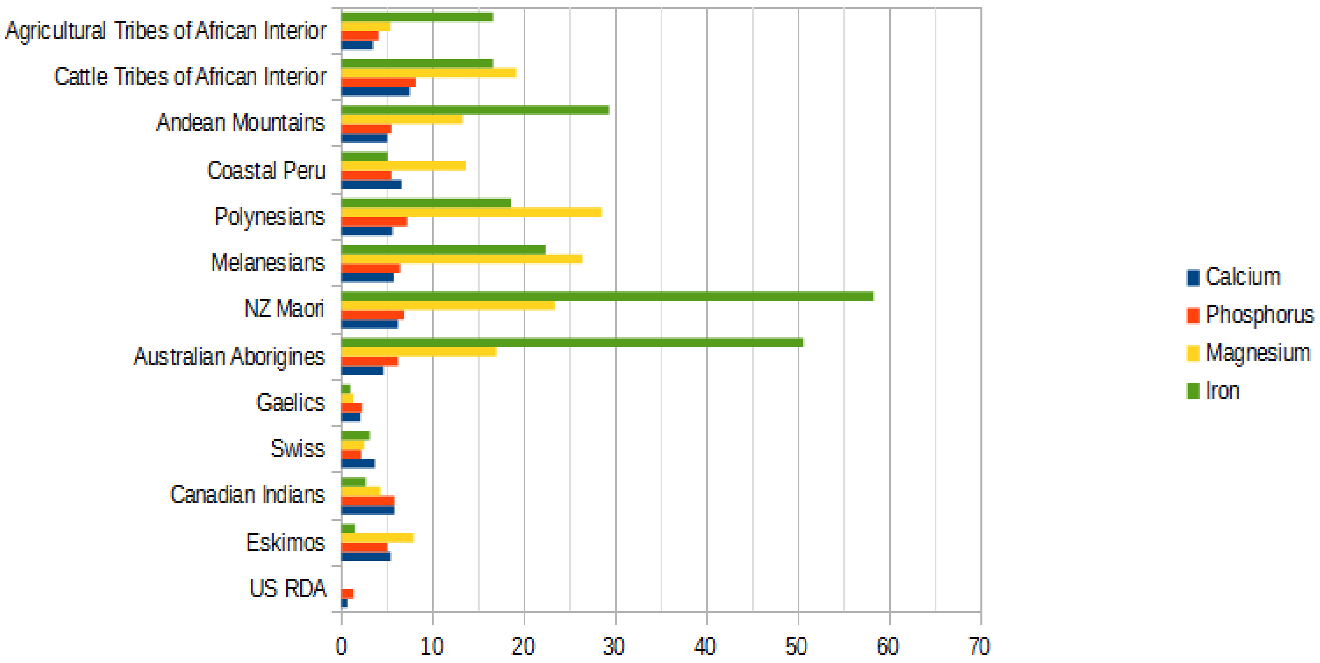


Cows that graze on fresh, young, fast-growing, green grass in high altitude areas have milk with a higher vitamin content. So those who drink these milk products will be getting a much higher vitamin content than milk products from cows on less healthy grass.

Dr. Price found that most people are not getting but half the recommended daily amounts of minerals. He determined that a large part of the reason the body is inefficient at removing all of the minerals from ingested food was that the diets of most people lack fat-soluble vitamins and activators. He said, “It is possible to starve for minerals that are abundant in the foods eaten because they cannot be utilized without an adequate quantity of the fat-soluble activators.”

At the time the US Recommended Daily Allowance of calcium was 0.68 grams, phosphorus 1.32 grams, iron 0.015 grams. Dr. Price estimated that one should consume 4 times these amounts to provide sufficient nutrients in periods of rapid growth, stress, pregnancy, sickness, etc.. Eating the white man’s foods also displaces some of the nutrients consumed. The primitive groups he studied all had diets that provided at least 4 times the US RDA.

The RDA for vitamin A in 1941 was 5000 I.U. People believed they could get enough vitamin D from getting some sunshine everyday, but if one could not get much sunshine or for pregnant and lactating women, vitamin D should be supplemented in the amount of 400-800 I.U. Vitamin E is another fat-soluble vitamin that’s important for health, but I could not find any data from that time period for it. Dr. Price found that all the primitive diets he studied contained 10 or more times the amount of fat soluble vitamins. The chart below shows the number of times over the US RDA that these primitive diets provided. For example, the diet of the Australian Aborigines provided 50 times the US RDA of iron.



Many people believe that they can get enough vitamin D from sunshine or from plant food, but Dr. Price disagrees. He cites a study which analyzed many different foods for their vitamin D content. The study found that “with the remote possibility of egg yolks, butter, cream, liver, and fish it is impossible to obtain any amount of vitamin D worthy of mention from common foods. Vegetables do not contain vitamin D.” Dr. Price writes, “As yet I have not found a single group of primitive racial stock which was building and maintaining excellent bodies by living entirely on plant foods.” When he found vegetarians that had been such for any length of time, he also found physical degeneration in the form of dental caries, and in the new generation deformed, abnormal dental arches.

The primitive tribes of the world once knew how to cure diseases by eating certain organs or plants, but much of this has been lost. As an example, Dr. Price relates the following story. Some men were going on an expedition in the Rocky Mountain Range.

> While they were crossing the high plateau one of them nearly went blind with so violent a pain in his eyes that he feared he would go insane. It was not snow blindness, for they were equipped with glasses. It was due to lack of vitamin A. One day he almost ran into a mother grizzly bear and her two cubs. Fortunately, they did not attack him but moved off. He sat down on a stone and wept in despair of ever seeing his family again. As he sat there holding his throbbing head, he heard a voice and looked up. It was an old Indian who had been tracking that grizzly bear. He recognized this prospector’s plight and while neither could understand the language of the other, the Indian after making an examination of his eyes, took him by the hand and led him to a stream that was coursing its way down the mountain. Here as the prospector sat waiting, the Indian built a trap of stones across the stream. He then went upstream and waded down splashing as he came and thus drove the trout into the trap. He threw the fish out on the bank and told the prospector to eat the flesh of the head and the tissues back of the eyes, including the eyes, with the result that in a few hours his pain had largely subsided. In one day his sight was rapidly returning, and in two days his eyes were nearly normal. He told me with profound emotion and gratitude that that Indian had certainly saved his life.

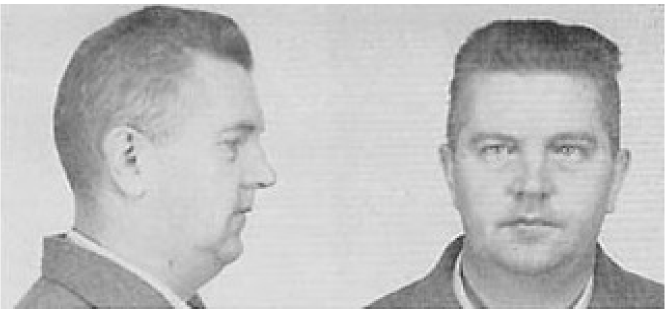
> Now modern science knows that one of the richest sources of vitamin A in the entire animal body is that of the tissues back of the eyes including the retina of the eye.

In females, a lack of vitamin A produces a disturbance in ovulation, resulting in sterility. The fetus may also be re-absorbed due to lack of vitamin A, even on a diet containing an abundance of vitamin E, which is known as the anti-sterility vitamin.

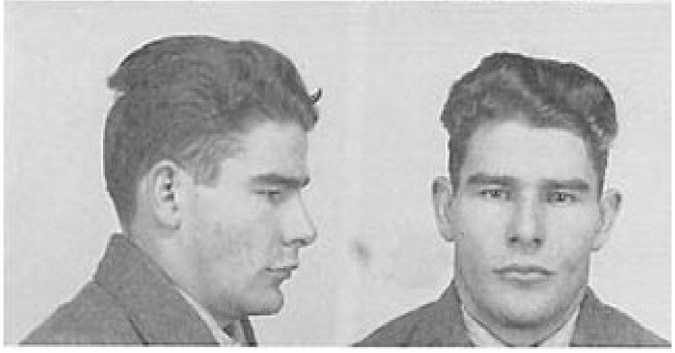
Even the beasts of the earth shall teach us (Job 12:7). For many years large cats held in captivity in zoos did not reproduce. This caused the prices of obtaining those animals to be very expensive. An animal specialist from London went to Africa for the purpose of obtaining more lions.

While in the lion country, he observed the lion kill a zebra. The lion proceeded then to tear open the abdomen of the zebra and eat the entrails at the right flank. This took him directly to the liver. After spending some time selecting different internal organs, the lion backed away and turned and pawed dirt over the carcass which he abandoned to the jackals. The scientist hurried to the carcass and drove away the jackals to study the dead zebra to note what tissues had been taken. This gave him the clue which when put into practice has entirely changed the history of the reproduction of the cat family in captivity. The addition of the organs to the foods of the captive animals born in the jungle supplied them with foods needed to make reproduction possible. Their young, too, could reproduce efficiently.... If we observe the parts of an animal that a cat eats when it kills a small rodent or bird, we see that it does not select exclusively the muscle meat.

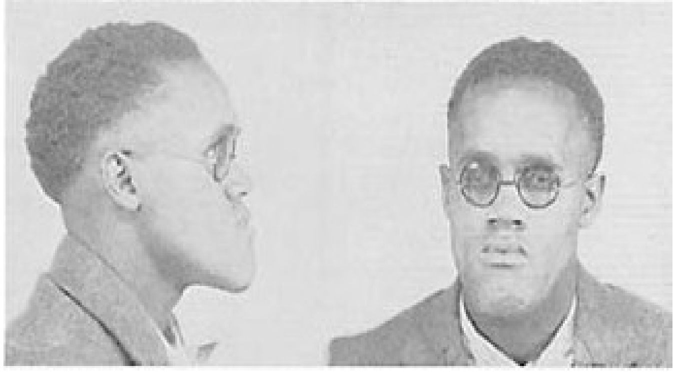
So what do you see in this picture?



Under-developed lower parts of the face, pinched nostrils, and vision problems. And in this picture?

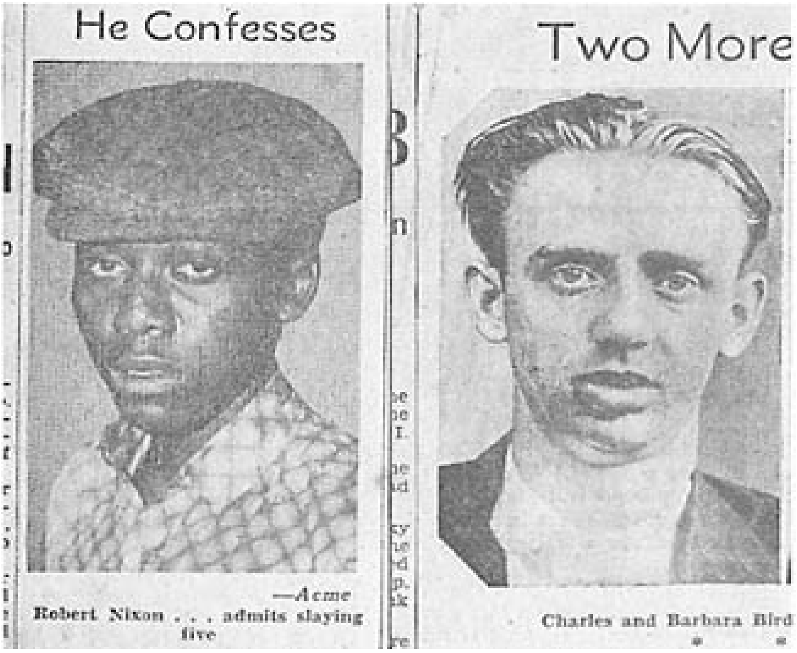


Under-developed lower parts of the face and pinched nostrils. And here?



Though the nostrils are wider and the lower jaw is protruding, in general you see a very deformed face. The nose structure is somewhat squashed, the jaw juts out with an under-bite, the head is shaped very strangely, and the man has vision problems.

All 3 of these men were convicted criminals. Dr. Price found that most criminals had facial deformities caused by prenatal vitamin deficiencies. He also studied school children and found that practically all of those labeled “delinquent” had facial deformities of many kinds – deformed dental arches, cleft palates, pinched nostrils, under-developed lower jaws, etc. These physical deformities reflect a mental disturbance. Dr. Price noted that “Criminal tendencies in isolated primitives are so slight that no prisons are required. I have referred to the Loetschental Valley in Switzerland, which, until recently, has been physically isolated from the process of modernization. For the 2,000 in that valley, there is no prison. In Uganda, Africa, the Ruanda tribes estimated to be 2.5 million, had no prisons.”



He Confesses

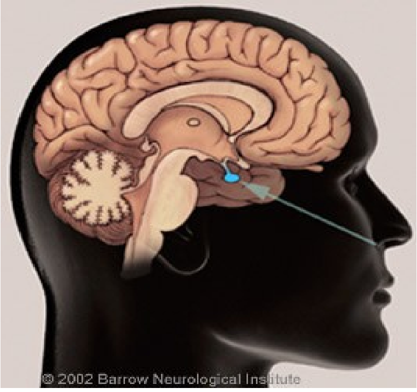
—Acme

Robert Nixon . . . admits slaying five

Two More

Charles and Barbara Bird

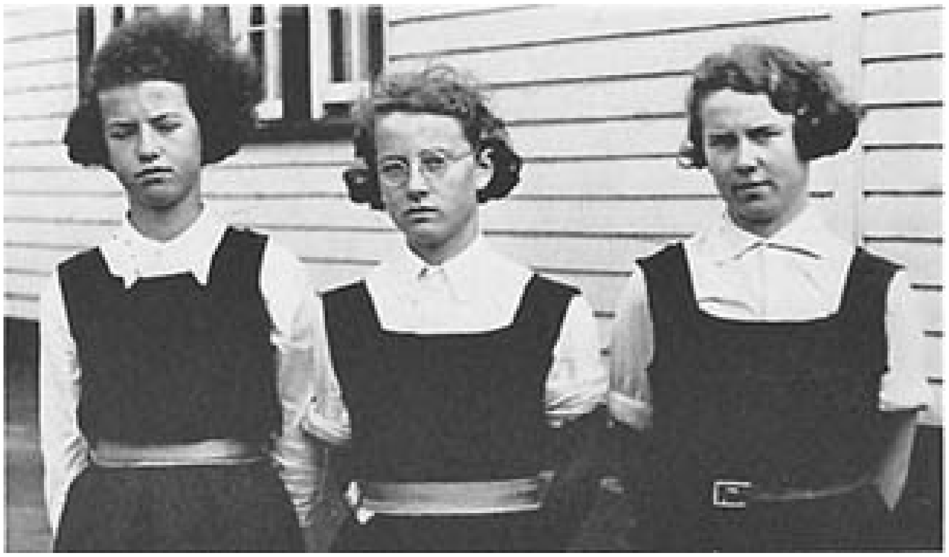
“The prisoners in a jail were examined, and all of them except 2 habitual drunkards showed marked evidence of prenatal injury. If space permitted, it would be interesting to include here a discussion and illustrations of the physical characteristics of the racketeers and criminals whose pictures are shown in our newspapers almost daily. It is rare that a normal face is depicted in this group."



When the facial bones are deformed, the glands and organs that reside in the cavities of the head also suffer injury. One which experiences a great deal of injury on the Western diet is the pituitary gland (pictured in blue in the image to the right). The pituitary gland is situated on the underside of the brain just behind the eyes. It is the governing body for the activity of growth, and largely controls the functioning of several of the other glands of internal secretion. It is, as it were, the master of the ship.

Those with fat-soluble vitamin deficiencies have under-developed pituitary glands. The results are lack of development of the face, with a narrowing of the nose and dental arches, and generally poor growth, narrow bodies, etc. Another doctor, Dr. Mortimer, conducted experiments analyzing skull x-rays with pituitary function, and his studies "seem to indicate clearly that facial and dental arch form are directly related to and controlled by the functioning of the pituitary body in the base of the brain."

Dr. Price writes, "It is important to emphasize in connection with the development of the deformities of the face that other skeletal deficiencies or abnormalities result from the same disturbing factors. One of these is the narrowing of the entire body, with a tendency to increase in height. This is shown in many of the family groups of modernized primitives. The effect of this narrowing of the body, which in girls results in the boyish type of figure due to the narrowing of the hips, introduces an entirely new and serious problem in the experience of our modern civilization when confronted with the problems of childbirth."



In the picture above the girls are sisters. The oldest is on the right, youngest on the left. Notice how there is a gradual lengthening and narrowing of the body as the nutritional stores of the parents had become depleted. The youngest girl is more likely to have problems in childbearing than her older sisters.

Studies conducted on animals reveal that in nutritionally unfavorable conditions, the sperm can show abnormalities in the neighborhood of 85%, but if the nutritional needs of the man are met, the abnormal sperm drops to 15% or less. The Biblical saying is proven true: “The fathers have eaten sour grapes, and the children’s teeth are set on edge”.

The nutritional needs of the mothers are obviously important. The first child has the advantage of getting the nutritional wealth the mother’s body has stored up during her life, while subsequent children get only the amount stored up since the birth of the previous child. There is even a saying that a woman will lose one tooth per child, due to the nutritional strain placed on the body by having children. Of course, this doesn’t have to happen. If the woman increases her nutritional intake before conception, during gestation and lactation, she and her baby will both be healthy. This is why many primitive cultures had special dietaries for mothers and often minimum time periods between children (2.5-3 years minimum in most cases). For example, the Masai give each growing child and pregnant or lactating woman a share of blood, when available, before giving it to others in the tribe.

Dr. Price’s research is very important for us to understand. It was even mentioned by Morris Fishbein, the editor of the Journal of the American Medical Association (JAMA) from 1924-1949. He became known as the “medical Mussolini” for labeling natural healers, Native Americans, and American midwives of the time as all being “quacks” because their medicines and practices could not be controlled by him. He ran the AMA like a dictatorship, requiring all doctors to be approved members or have their licenses taken away. He single-handedly turned healing into a crime in America and empowered the chemical medicine industry that has become the allopathic America we know today. It can be said that he has caused more suffering in human history than the Spanish Inquisition.

Fishbein wrote: “The University of Chicago summoned four experts who have been devoting themselves to research on teeth to discuss the problem of constant decay of the teeth which is a disease in our modern civilization. Apparently people who live in remote areas of the globe under native or natural conditions are more free from tooth decay and have fewer cavities than do civilized men. When these people come into contact with the civilization of the white man and adopt his manner of living and his diets, their teeth begin to decay immediately and apparently tooth decay progresses rapidly.” Unfortunately he immediately proceeded to advocate toothbrushes, tooth pastes, mouth washes, and other modern-day so-called “solutions” to tooth problems because this is the direction he was driving America toward, not changes in diets and providing the body with optimal nutrition so that diseases would occur in the first place.

Now you’re probably thinking about how you can make yourself healthier. Well, here is an important question: Where does health come from?

The soil. Now, take, for example, wheat. If you were to harvest 3600 pounds of wheat, it would contain 25-28 pounds of phosphorus in the kernels. The leaves and stems of rapidly growing young plants and grasses are rich in calcium and phosphorus. Phosphorus, calcium, and other minerals are available in the soil in limited quantities, and if it is not replaced after harvesting crops, the soil will eventually not be able to produce those crops.

It was common practice even in Price’s day for millions of pounds of nutrients to be taken away from the land without being replenished. Yet when soils become depleted, you will find an increase in skeletal deformities, arthritis, dental caries, reduction in stature, and other health problems.

“The nutritive value of young grass, when in a state of rapid growth, carries not only a very large quantity of minerals, but also digestible proteins.... It is observed also that not only do the milk products of such cows remain at a high level while the cows are on the rapidly growing young grass, particularly a rapidly growing young wheat grass or young rye grass, but the animals themselves are in better physical condition than when on grain concentrates. Further, that calves fed on the milk of those cows grow much more rapidly than they do when the cows are on other fodder and have a much higher resistance to disease. Grass, to provide these nutritional factors, must be grown on a very rich, well-balanced soil. A young plant, of necessity, produces a rapid depletion of soil."

So, think this through. Where does the phosphorus go? There is some phosphorus in the soil. Plants grow and use it, mostly in the seed. Animals and humans eat the seed, and some phosphorus is stored in the bones and teeth, and some is used in the production of energy and in other metabolic processes. Then what? Any that isn't stored goes out through the waste into the sewage system, where it is flushed into the ocean. It is not returned to the soil where it can be recycled. Dr. Price says, "so limited is the supply that if it were not constantly being returned to the soil, a single century would be sufficient to produce a disastrous reduction in the amount of life." And have we seen that? I would say, "yes". We have diseases like never before in human history, increased mortality rates, and greatly reduced fertility and birth rates.

Dr. Price was told that it would cost, in present-day dollar amounts, about $850 per acre to replenish the phosphorus to a depleted soil. But cost isn't the only problem. He writes, "If sufficient phosphorus in a form easily available for plant use were supplied to the land at once, it would kill the plant life; it must be provided in a form in which by a process of weathering it is made slowly available for plant utilization. Phosphorus is only one of the minerals that is readily taken from the soil. Other minerals also are difficult to provide."

Besides returning waste back to the soil, what are some other ways of replenishing the soil?

There are some natural methods: One is by glacial melt. Glaciers form when water freezes in the mountains into solid masses of ice. They freeze minerals from the mountainside into their structure, and release them when they melt. Another way is by the natural flooding of some rivers, such as the annual flooding of the Nile. The Nile River carries rich, fertilizing soil from the high mountains of the African interior toward the coast, where it floods the banks and replenishes the soil.

The Aran Islands lie off western Ireland. All 3 are small... wastes of rock... without trees... without soil....

The inhabitants of Aran go to the sea and gather seaweed....

Great piles of seaweed...

Which they compost and turn into topsoil for agriculture.

Those living on the many islands between Scotland and Greenland have another way to build and fertilize soil. They live in houses with thatched roofs, and every October the thatching is replaced. The old roof material is used “as a special fertilizer for the soil because of its impregnation with chemicals that have been obtained from the peat smoke which may be seen seeping through all parts of the roof at all seasons of the year. Peat fires are kept burning for this explicit purpose even when the heat is not needed.”

Dr. Price conducted an experiment in Cleveland, Ohio with school children. The children had very large cavities which had de-calcified the tooth to the pulp chamber. The pain from the pressure of eating was so great that temporary fillings had to be put in the teeth. The children were brought to a mission where they were fed 1 reinforced meal for 6 days a week. The meals at home were not changed; neither was the way the teeth were cleaned or cared for. Measurements were taken every 4-6 weeks for the duration of the study, usually 3-5 months. Their home diets largely consisted of sweetened strong coffee, white bread, vegetable fats, pancakes made of white flour and eaten with syrup, and doughnuts fried in vegetable fat.

“The nutrition provided these children in this one meal included the following foods. About 4 ounces of tomato juice or orange juice and a teaspoonful of a mixture of equal parts of a very high vitamin natural cod liver oil and an especially high vitamin butter was given at the beginning of the meal. They then received a bowl containing approximately a pint of a very rich vegetable and meat stew, made largely from bone marrow and fine cuts of tender meat: the meat was usually broiled separately to retain its juice and then chopped very fine and added to the bone marrow meat soup which always contained finely chopped vegetables and plenty of very yellow carrots; for the next course they had cooked fruit, with very little sweetening, and rolls made from freshly ground whole wheat, which were spread with the high-vitamin butter. The wheat for the rolls was ground fresh every day in a motor driven coffee mill. Each child was also given 2 glasses of fresh whole milk. The menu was varied from day to day by substituting for the meat stew, fish chowder or organs of animals.”

The children’s nutrition was greatly improved. “The tissues of the pulp built in secondary dentin thus re-incasing itself in a closed chamber.” The teeth began to regrow! And teachers came to Dr. Price to ask what had changed because these students were suddenly behaving better in class and getting better grades. “Dental caries is only one of the many expressions of our modern deficient nutritions.”

You can improve your own health by adopting as many dietary practices of these natives as possible. You can add milk products (especially raw milk products), liver, organ meats, eggs, seafood and seaweed to your diet. The more of these you can add, and eat consistently, the better your health will become. At the same time, you should reduce the amount of refined foods you eat. Eating the things we were intended to eat is how we can avoid the diseases of our modern times and live the lives we were meant to live.

For more information, please visit the Weston A. Price Foundation, www.wapf.org.

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